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Page 1 of 7

SEP 16 2003

TECH CEN



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/973,382C

DATE: 09/11/2003

TIME: 11:29:04

Input Set : A:\D6230SEQ.txt

Output Set: N:\CRF4\09112003\I973382C.raw

2 <110> APPLICANT: Heston, Warren D.W.
3 O'Keefe, Denise S.
5 <120> TITLE OF INVENTION: DNA Encoding the Prostate-Specific Membrane
6 Antigen-Like Gene and Uses Thereof
8 <130> FILE REFERENCE: D6230

C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/973,382C

11 <141> CURRENT FILING DATE: 2001-10-09
13 <150> PRIOR APPLICATION NUMBER: PCT/US00/09417
14 <151> PRIOR FILING DATE: 2000-04-09

16 <160> NUMBER OF SEQ ID NOS: 38

18 <210> SEQ ID NO: 1

19 <211> LENGTH: 1992

20 <212> TYPE: DNA

21 <213> ORGANISM: Homo sapiens

23 <220> FEATURE:

24 <223> OTHER INFORMATION: cDNA sequence of PSMA-like gene

26 <400> SEQUENCE: 1

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29 gatgtccttt tttgttaggcc taatgacaaa aggttgaaga taaaagttcta 150
30 gtactcattt aagtgtataa ttgaaaattt atattaccaa atctggaaaca 200
31 accaatttaa aataaggaaa gaaagacact gtgtttctta gttaaaaat 250
32 gcccagctgg cagggccaa aggagtctt ctctactcag accctgctga 300
33 ctactttgct cctgggtga agtcctatcc agacggttgg aatcttcctg 350
34 gaggtgggtt ccagcgtgga aatatcctaa atctgaatgg tgcaggagac 400
35 cctctcacac caggttaccc agcaaattgaa tacgcttata gcatggaaat 450
36 tgcagaggct gttggcttcc caagtattcc tttcatcca gttggatact 500
37 atgatgcaca gaagctctta gaaaaatgg gtggctcagc accaccagat 550
38 agcagctgga gaggaagtct caaatgttcc tacaatgttgc gacctggctt 600
39 tactggaaac ttttctacac aaaaagtcaa gatgcacatc cactctacca 650
40 atgaagtgac gagaatttac aatgtgatag gtactctcag aggagcagt 700
41 gaaccagaca gatatgtcat tctggaggt caccggact catgggttt 750
42 tgggtgttatt gaccctcaga gtggagcagc tgggttcat gaaactgtga 800
43 ggagctttgg aacactgaaa aaggaagggt ggagacctag aagaacaatt 850
44 ttgtttgcaa gctggatgc agaagaattt ggtctcttg gttctactga 900
45 gtggcagag gataatcaa gactccttca agagcgtggc gtggctata 950
46 ttaatgctga ctcatctata gaaggaaact acactctgag agttgattgt 1000
47 acaccactga tgtacagctt ggtataacaac ctaacaaaag agctgaaaag 1050
48 ccctgatgaa ggctttaag gcaaattctt ttatgaaagt tggactaaaa 1100
49 aaagtcccttc cccagagttc agtggcatgc ccaggataag caaattggaa 1150
50 tctggaaatg attttgaggt gttcttccaa cgacttggaa ttgcttcagg 1200
51 cagagcacgg tataactaaaa attggaaac aaacaaattc agcggctatc 1250
52 cactgtatca cagtgtctat gaaacatatg agttggttggaa aagttttat 1300

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 54 ggtgtttgag ctagccaatt ccatagtgtc ccctttgtat tgcgagatt 1400
 55 atgctgttagt ttaagaaag tatgctgaca aaatctacaa tatttctatg 1450
 56 aaacatccac aggaaatgaa gacatacagt ttatcatttgc attcacttt 1500
 57 ttctgcagta aaaaatttta cagaaattgc ttccaagttc agcgagagac 1550
 58 tccaggactt tgacaaaagc aacccaatat tgttaagaat gatgaatgt 1600
 59 caactcatgt ttctgaaaag agcattttt gatccattag gtttaccaga 1650
 60 cagacctttt tataggcatg tcatactatgc tccaaagcagc cacaacaagt 1700
 61 atgcagggga gtcatttcca ggaatttatgt atgcctgtt tgatattgaa 1750
 62 agcaaagtgg acccttccaa ggcctgggaa gatgtgaaga gacagatttc 1800
 63 tggcagcc ttccacagtgc aggcaagctgc agagactttg agtgaagtag 1850
 64 cctaagagga ttcttagag actctgtatt gaatttgcgt ggtatgtcac 1900
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 72 <213> ORGANISM: Homo sapiens
 74 <220> FEATURE:
 75 <223> OTHER INFORMATION: deduced amino acid sequence of PSMA-like
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 78 <400> SEQUENCE: 2
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 81 Lys Val Ser Tyr Asn Val Gly Pro Gly Phe Thr Gly Asn Phe Ser
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 84 35 40 45
 85 Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
 86 50 55 60
 87 Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe
 88 65 70 75
 89 Gly Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Thr
 90 80 85 90
 91 Val Arg Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg
 92 95 100 105
 93 Arg Thr Ile Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu
 94 110 115 120
 95 Leu Gly Ser Thr Glu Trp Ala Glu Asp Asn Ser Arg Leu Leu Gln
 96 125 130 135
 97 Glu Arg Gly Val Ala Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly
 98 140 145 150
 99 Asn Tyr Thr Leu Arg Val Asp Cys Thr Pro Leu Met Tyr Ser Leu
 100 155 160 165
 101 Val Tyr Asn Leu Thr Lys Glu Leu Lys Ser Pro Asp Glu Gly Phe
 102 170 175 180
 103 Glu Gly Lys Ser Leu Tyr Glu Ser Trp Thr Lys Lys Ser Pro Ser
 104 185 190 195
 105 Pro Glu Phe Ser Gly Met Pro Arg Ile Ser Lys Leu Gly Ser Gly

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108	215	220	225
109	Arg Ala Arg Tyr Thr Lys Asn Trp Glu	Thr Asn Lys Phe Ser	Gly
110	230	235	240
111	Tyr Pro Leu Tyr His Ser Val Tyr Glu	Thr Tyr Glu Leu Val	Glu
112	245	250	255
113	Lys Phe Tyr Asp Pro Met Phe Lys Tyr	His Leu Thr Val Ala	Gln
114	260	265	270
115	Val Arg Gly Gly Met Val Phe Glu Leu	Ala Asn Ser Ile Val	Leu
116	275	280	285
117	Pro Phe Asp Cys Arg Asp Tyr Ala Val	Val Leu Arg Lys Tyr	Ala
118	290	295	300
119	Asp Lys Ile Tyr Asn Ile Ser Met Lys	His Pro Gln Glu Met	Lys
120	305	310	315
121	Thr Tyr Ser Leu Ser Phe Asp Ser Leu	Phe Ser Ala Val Lys	Asn
122	320	325	330
123	Phe Thr Glu Ile Ala Ser Lys Phe Ser	Glu Arg Leu Gln Asp	Phe
124	335	340	345
125	Asp Lys Ser Asn Pro Ile Leu Leu Arg	Met Met Asn Asp Gln	Leu
126	350	355	360
127	Met Phe Leu Glu Arg Ala Phe Ile Asp	Pro Leu Gly Leu Pro	Asp
128	365	370	375
129	Arg Pro Phe Tyr Arg His Val Ile Tyr	Ala Pro Ser Ser His	Asn
130	380	385	390
132	Lys Tyr Ala Gly Glu Ser Phe Pro Gly	Ile Tyr Asp Ala Leu	Phe
133	395	400	405
134	Asp Ile Glu Ser Lys Val Asp Pro Ser	Lys Ala Trp Gly Asp	Val
135	410	415	420
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143	<211> LENGTH: 2653		
144	<212> TYPE: DNA		
145	<213> ORGANISM: Homo sapiens		
147	<220> FEATURE:		
148	<223> OTHER INFORMATION: nucleotide sequence of human PSMA gene		
150	<300> PUBLICATION INFORMATION:		
151	<308> DATABASE ACCESSION NO: GenBank Accession No. M99487		
152	<309> DATABASE ENTRY DATE: 1995-01-08		
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157	aactggaccc caggtctgga gcgattcca gcctgcaggg ctgataaagcg	150	
158	aggcattagt gagattgaga gagactttac cccgccgtgg tgggtggagg	200	
159	gcgcgcaagta gagcagcagc acaggcgccgg gtcccgaggag gcccggctctg	250	
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163	atgaagctac	taacattact	ccaaagcata	atatgaaagc	atttttggat	450
164	gaattgaaag	ctgagaacat	caagaagttc	ttatataatt	ttacacagat	500
165	accacattta	gcaggaacac	aacaaaactt	tcagcttgca	aagcaaaattc	550
166	aatcccagtg	gaaagaattt	ggcctggatt	ctgttgagct	agcacattat	600
167	gatgtcctgt	tgtcctaccc	aaataagact	catcccaact	acatctcaat	650
168	aattaatgaa	gatggaaatg	agatttcaa	cacatcatta	tttgaaccac	700
169	ctcctccagg	atatgaaaat	gtttcggtata	tttgtaccacc	tttcagtgct	750
170	ttctctcctc	aaggaatgcc	agagggcgat	ctagtgtatg	ttaactatgc	800
171	acgaactgaa	gacttctta	aatttggaaac	ggacatgaaa	atcaatttgct	850
172	ctggggaaat	tgttaattgcc	agatatggaa	aagttttcag	aggaaataag	900
173	gttaaaaatg	cccagctggc	agggggccaaa	ggagtcatcc	tctactccga	950
174	ccctgctgac	tactttgctc	ctgggggtgaa	gtcctatcca	gatgggttgg	1000
175	atcttcctgg	aggtgggtgc	cagcgtggaa	atatcctaaa	tctgaatgg	1050
176	gcaggagacc	ctctcacacc	aggttaccac	gcaaatgaat	atgcttatag	1100
177	gcgttgaatt	gcagaggctg	ttgggtcttcc	aagtattcct	gttcatccaa	1150
178	ttggatacta	tgtgcacag	aagtccttag	aaaaaatggg	tggctcagca	1200
179	ccaccagata	gcagctggag	aggaagtctc	aaagtgcct	acaatgttgg	1250
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182	ggagcagtgg	aaccagacag	atatgtcatt	ctgggagggtc	accgggactc	1400
183	atgggtgttt	gggtgttattg	accctcagag	tggagcagct	gttggcatcg	1450
184	aaatttgtgag	gagcttggaa	acactgaaa	aggaagggtg	gagacctaga	1500
185	agaacaattt	tgtttcaag	ctgggatgca	gaagaatttg	gtcttcttgg	1550
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187	tggcttataat	taatgctgac	tcatctatacg	aagggaaacta	cactctgaga	1650
188	gttgattgt	caccgctgat	gtacagcttg	gtacacaacc	taacaaaaga	1700
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191	aaattggat	ctgaaatga	ttttgaggtg	ttcttccaac	gacttggaaat	1850
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193	gcccgtatcc	actgtatcac	agtgtctatg	aaacatatga	gttgggtgaa	1950
194	aagttttatg	atccaatgtt	taaatatcac	ctcactgtgg	cccaggttcg	2000
195	aggagggatg	gtgtttgagc	tagccaaatc	catagtgtc	ccttttgatt	2050
196	gtcgagatta	tgctgtatgtt	ttaagaaagt	atgctgacaa	aatctacagt	2100
197	atttctatga	aacatccaca	gaaatgaag	acatacagtg	tatcatttga	2150
198	ttcactttt	tctgcagtaa	agaattttac	agaaatttgct	tccaaagtca	2200
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201	gttaccagac	aggcctttt	ataggcatgt	catctatgt	ccaagcagcc	2350
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205	gtgaagtagc	ctaagaggat	tcttttagaga	atccgtattt	aatttggatg	2550
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211 <210> SEQ ID NO: 4

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Input Set : A:\D6230SEQ.txt
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212 <211> LENGTH: 750
 213 <212> TYPE: PRT
 214 <213> ORGANISM: Homo sapiens
 216 <220> FEATURE:
 217 <223> OTHER INFORMATION: deduced amino acid sequence of PSMA protein
 219 <400> SEQUENCE: 4
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 225 35 40 45
 226 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala
 227 50 55 60
 228 Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr
 229 65 70 75
 230 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe
 231 80 85 90
 232 Gln Leu Ala Lys Gln Ile Gln Ser Gln Trp Lys Glu Phe Gly Leu
 233 95 100 105
 234 Asp Ser Val Glu Leu Ala His Tyr Asp Val Leu Leu Ser Tyr Pro
 235 110 115 120
 236 Asn Lys Thr His Pro Asn Tyr Ile Ser Ile Ile Asn Glu Asp Gly
 237 125 130 135
 238 Asn Glu Ile Phe Asn Thr Ser Leu Phe Glu Pro Pro Pro Pro Gly
 239 140 145 150
 240 Tyr Glu Asn Val Ser Asp Ile Val Pro Pro Phe Ser Ala Phe Ser
 241 155 160 165
 242 Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala
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 244 Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met Lys Ile Asn
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 250 Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys
 251 230 235 240
 252 Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg
 253 245 250 255
 254 Gly Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro
 255 260 265 270
 256 Gly Tyr Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu
 257 275 280 285
 258 Ala Val Gly Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr
 259 290 295 300
 260 Asp Ala Gln Lys Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro
 261 305 310 315
 263 Asp Ser Ser Trp Arg Gly Ser Leu Lys Val Pro Tyr Asn Val Gly

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/973,382C

DATE: 09/11/2003

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Input Set : A:\D6230SEQ.txt

Output Set: N:\CRF4\09112003\I973382C.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number